National Institute of Environmental Health Sciences

The epidemiology of dermatomyositis in South Australia

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Abstract:

Aim: To review the epidemiology of dermatomyositis (DM) in South Australia (SA) and to compare it with other Australian states and New Zealand (NZ). Methods: Muscle biopsy and hospital separation data for DM in SA, other Australian states, and NZ were determined. The role of environmental factors was investigated. Results: From 1990 to 2005, there were 21 cases of biopsy-proven DM in SA (62% F, mean age 49.7 ± 18.4) and 99 cases of polymyositis (PM). Based on biopsy-proven figures, the average incidence of DM per year in SA was 1.4 ± 1.2, and 6.6 ± 2.6 for PM. Since 1991, there were 221 and 441 total separations from SA hospitals with principal diagnoses of DM and PM, respectively. The ratio DM/DM + PM is thought to correlate with solar irradiance, and within Australia, SA had the lowest ratio (0.39, 95% CI 0.22-0.56), with the highest ratio seen in WA (0.67, 95% CI 0.53-0.81). This ratio did not correlate with latitude, duration of sunshine, cloud cover, relative humidity or total rainfall. Within SA, no correlation with socioeconomic status was seen. Australian data were similar to NZ, where the ratios were 0.34 and 0.3 for North and South Islands, respectively. As separation data reflect total hospital visits, we also ascertained individual patient separations from SA hospitals (1997 to July 2005) and found a similar ratio of DM/DM + PM (0.38 ± 0.08). Conclusions: The proportion of inflammatory myositis which is DM varies nationwide, with a consistent ratio seen in SA (33-38%). Geoclimatic variables do not appear to influence DM/PM disease expression in Australia.

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Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Meteorological Factors, Precipitation, Solar Radiation, Other Exposure

Other Exposure: cloud cover

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Australasia

Health Impact: ☑

specification of health effect or disease related to climate change exposure

Dermatological Effect, Other Health Impact

Other Health Impact: dermatomyositis

Mitigation/Adaptation: ☑

mitigation or adaptation strategy is a focus of resource

Adaptation

Population of Concern: A focus of content

Population of Concern: ☑

populations at particular risk or vulnerability to climate change impacts

Low Socioeconomic Status

Resource Type: ☑

format or standard characteristic of resource

Research Article

Timescale: ☑

time period studied

Time Scale Unspecified

Vulnerability/Impact Assessment: ☑

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content